

CLAIMS

1. A device for connecting and locking building boards comprising a top side (10) and a bottom side (11), especially floor panels (1, 2) having a core made of wood material and provided with a groove (3, 4; 5, 6; 18, 19) on at least two opposite side edges (I, II), comprising an insert (7; 8; 9) intended for locking purposes, which insert can be inserted into the groove (3 or 4; 5, 6; 18 or 19) of one of the side edges (I, II), the boards (1, 2) being connected by substantially horizontal displacement (direction Q) one toward the other, characterized in that the insert (7; 8; 9; 17) is provided with at least one resilient lip (7a, 8a; 9a; 17a) directed toward the top side (10) or the bottom side (11).
2. The device as claimed in claim 1, characterized in that the insert (7; 8) is provided with two resilient lips (7a, 7b, 8a, 8b) directed in opposite directions.
3. The device as claimed in claim 1, characterized in that the insert (17) is provided with resilient lips (17a, 17b) directed toward the bottom side (11).
4. The device as claimed in claim 1, 2 or 3, characterized in that the resilient lip (7a, 7b, 8a, 8b; 9a; 17a, 17b) has a tip (7c, 8c, 9c) running obliquely to the top side (10) and bottom side (11), which tip, for locking, cooperates with an obliquely running edge (3a; 4a; 5a; 20a, 21a).
5. The device as claimed in one or more of the preceding claims, characterized in that the insert (7, 8; 9; 17) consists of plastic.

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6. The device as claimed in claim 5, characterized in that the insert (7, 8) has in its core at least one cavity (12).
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7. The device as claimed in one or more of the preceding claims, characterized in that the insert (17) has midway between the resilient lips (17a, 17b) a projection (17c) which rests on a shoulder (18b, 19b), running parallel to the bottom side (11), of the bottom lip (18a, 19a) of the groove (18, 19).
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8. The device as claimed in one or more of the preceding claims, characterized in that when the building boards (1, 2) are mutually connected, the insert (17) is essentially fully surrounded in its peripheral contour by the core material of the boards (1, 2).
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9. The device as claimed in claim 4, characterized in that the angle of inclination between the obliquely running edge (3a; 4a; 5a; 20a; 21a) measures between 90° and 135°.
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10. The device as claimed in one or more of the preceding claims, characterized in that the thickness of the insert (7, 8, 9, 17) measures 1.5-5 mm.
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11. The device as claimed in one or more of the preceding claims, characterized in that the depth of penetration of the insert (7, 8, 9, 17) into the groove (18, 19) is 3-8 mm.
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12. The device as claimed in claim 5, characterized in that the flexural modulus of the plastic is 1000-7000 N/mm<sup>2</sup>.

- 5 13. The device as claimed in claim 1, characterized in that the board (1, 2) is provided on one side edge (I) with a tongue (13) pointing substantially in the transverse direction (Q) and on the other side edge (II) with a groove (14) corresponding thereto.
- 10 14. The device as claimed in claim 1, characterized in that the side edges of the insert (8) taper outward.
- 15 15. The device as claimed in claim 14, characterized in that the side edges of the insert (8) are rounded.
- 20 16. The device as claimed in claim 14, characterized in that the side edges of the insert (8) run conically.
- 25 17. The device as claimed in one or more of the preceding claims, characterized in that the insert (7, 8, 9, 17) is inserted into a groove (3, 4; 5, 6; 18, 19) at the factory.
- 30 18. The device as claimed in claim 17, characterized in that the insert (7, 8, 9, 17) is permanently connected to one groove (3, 4; 5, 6; 18, 19).
- 35 19. The device as claimed in claim 18, characterized in that the insert (7, 8, 9, 17) is glued in place.
20. The device as claimed in claim 1, characterized in that the grooves (3, 4; 5, 6; 18, 19) are cut with a fixed tool past which the boards (1, 2) are led.